

# Notice of Allowability

Application No.

10/650,323

Examiner

Marie R. Yamnitzky

Applicant(s)

HERRON ET AL.

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment filed September 22, 2006.
2. ☒ The allowed claim(s) is/are 9, 15 and 30-32.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☒ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 10062006.
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

Art Unit: 1774

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with John Lamming on October 05, 2006. This examiner's amendment corrects informalities in the specification that were not previously brought to applicant's attention. No extension of time is necessary to make this amendment.

A clean copy of the previously amended paragraph on page 5 of the specification is provided (the examiner expects that the line through the incorrect version of Formula II may not be recognized as a deletion by the printer), as well as a clean copy of the claims.

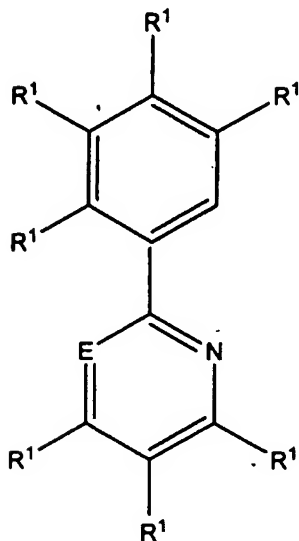
The application has been amended as follows:

In the specification:

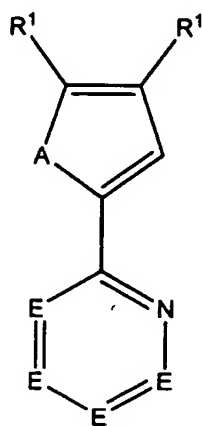
Page 1, line 39: "triple" has been changed to --triplet--.

Page 5, the first paragraph (amended paragraph received February 08, 2006) has been deleted and replaced with the following new paragraph:

In one embodiment, the first ligand is an arylheterocycle or a heteroarylheterocycle. In one embodiment, the first ligand is selected from ligands having Formula I or Formula II below.



Formula I



Formula II

wherein:

$R^1$  is the same or different at each occurrence and is selected from H, D,  $C_nH_{2n+1}$ ,  $C_nH_{n-1}$ ,

$OR^2$ ,  $SR^2$ ,  $N(R^2)_2$ , F,  $C_n(H+F)_{2n+1}$ ,  $OC_n(H+F)_{2n+1}$ ,  $OC_nH_{n-1}$ , and  $OCF_2X$ , or adjacent

pairs of  $R^1$  can be joined to form a five- or six-membered ring;

$R^2$  is the same or different at each occurrence and is H,  $C_nH_{2n+1}$ , or  $C_n(H+F)_{2n+1}$ ;

A is S or  $NR^2$ ; E is the same or different at each occurrence and is N or  $CR^1$ ;

X is H, Cl, or Br; and

n is an integer from 1 through 20.

Page 11, line 24: "poorlyluminescent" has been changed to --poorly-luminescent--.

Page 13, line 25: "having  $\lambda$ -max = \_\_ nm and" has been deleted.

In the claims:

1-8. (Canceled)

9. (Previously Presented) A luminescent organometallic complex composition of matter, the composition comprising

at least one transition metal, M, that produces phosphorescent emission at room temperature;

at least one first monoanionic bidentate ligand coordinated through a nitrogen on a heteroaromatic ring and a carbon which is part of an aromatic group; and

at least one second ligand, coordinated through a carbon atom on an aromatic group and having Formula III



wherein

Ar is an aromatic group,

Y is a group having a heteroatom capable of coordinating to metal M,

m is an integer from 1 through 20,

p is an integer from 1 through 5,

and further wherein one or more of the hydrogens in  $(\text{CH}_2)_m$  can be replaced with D or F,

wherein Y is selected from  $\text{NR}^2_2$ ,  $\text{OR}^2$ ,  $\text{SR}^2$ , and  $\text{PR}^3_2$ , wherein

$\text{R}^2$  is the same or different at each occurrence and is H or  $\text{C}_n\text{H}_{2n+1}$ ; and

$\text{R}^3$  is the same or different at each occurrence and is selected from H,  $\text{R}^2$ , and Ar.

10-14. (Canceled)

15. (Previously Presented) The composition of Claim 9, wherein M is iridium, the first ligand is phenylpyridine with substituents, the second ligand is  $\alpha,\alpha'$ -diphenylphosphino-m-xylene.

16-29. (Canceled)

30. (Previously Presented) A luminescent organometallic complex composition of matter, the composition comprising

iridium;

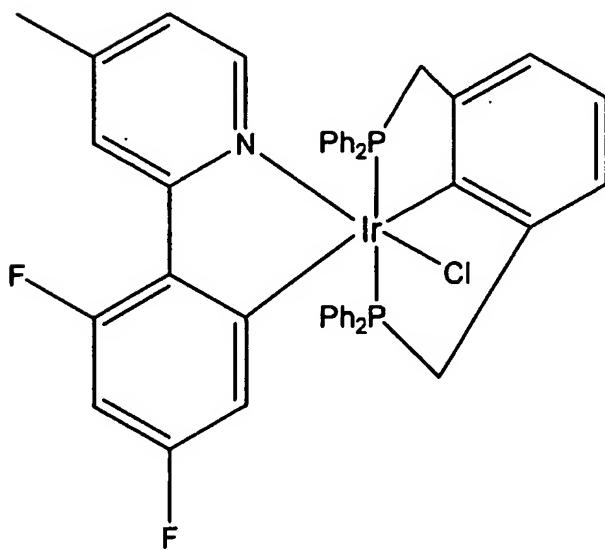
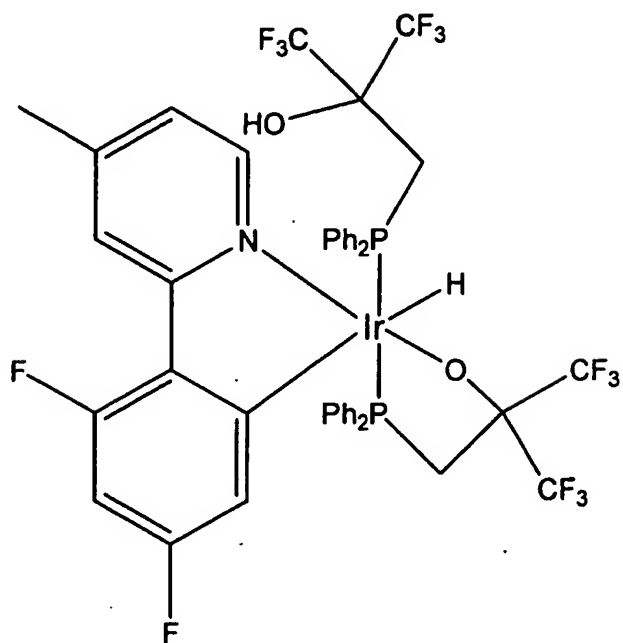
at least one first ligand which is a phenylpyridine with substituents;

at least one second hydride ligand; and

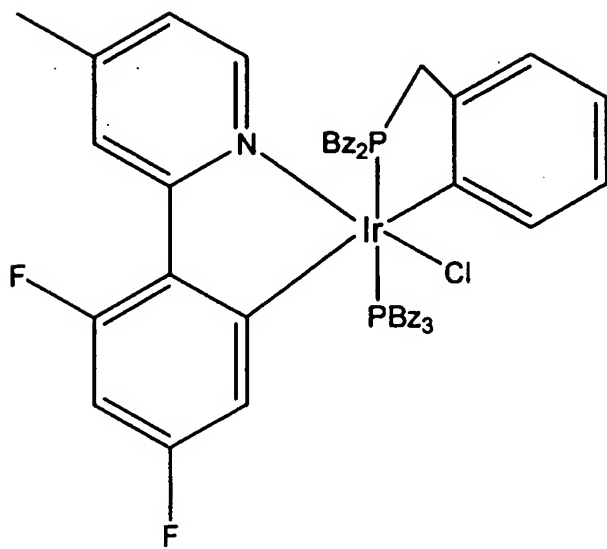
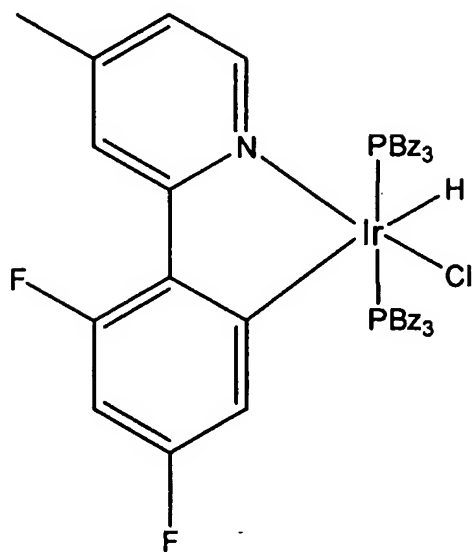
two diarylbenzylphosphine ligands.

31. (Previously Presented) A luminescent organometallic complex composition of matter selected from:

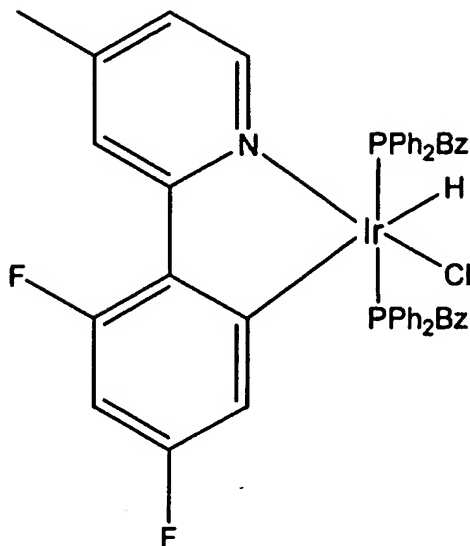
Art Unit: 1774



Art Unit: 1774



, or



where Ph is phenyl and Bz is benzyl.

32. (Previously Presented) The composition of Claim 9, wherein Ar is phenyl, m is 1, Y is P(Ar)<sub>2</sub>, and p is 1 or 2.

In the drawings:

The two drawing replacement sheets filed September 22, 2006 overcome the objections raised in the Office action mailed May 01, 2006. However, the sheets contain many extraneous markings, possibly artifacts of facsimile transmission, which may lead to a printer's rush and/or printing error. Applicant is required to file clean copies of these two drawing replacement sheets.



Art Unit: 1774

Claims 9, 15 and 30-32 are allowed. Allowed claims 9, 15, 32, 30 and 31 are renumbered as 1-5, respectively.

Any inquiry concerning this communication should be directed to Marie R. Yamnitzky at telephone number (571) 272-1531. The examiner works a flexible schedule but can generally be reached at this number from 6:30 a.m. to 4:00 p.m. Monday, Tuesday, Thursday and Friday, and every other Wednesday from 6:30 a.m. to 3:00 p.m.

The current fax number for all official faxes is (571) 273-8300. (Unofficial faxes to be sent directly to examiner Yamnitzky can be sent to (571) 273-1531.)

MRY  
October 06, 2006



**MARIE YAMNITZKY  
PRIMARY EXAMINER**

1774